

IZYUMSKIY, N.A.; LEBEDEV, A.S.; VARGANOVA, A.N., redaktor; PETROVSKAYA, Ye.,  
tekhnicheskiiy redaktor.

[Collection of rules and instructions on boiler inspection] Sbornik  
pravil i rukovodiashchikh materialov po kotlonadзору. Moskva, Izd-  
vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1954. 438 p.  
(Boilers--Inspection) (NGR 8:1)

LEBEDEV, A.S.

5689. RULES AND DATA ON BOILER INSPECTION. (SBOBNIK PRAVIL I  
RUKOVODYASHCHIKH MATERI AIDV PO KOTLOMAGZORU). Izyumskii, N.A. and Lebedev,  
A.S. (Moscow: Ministry of Municipal Affairs R.S.F.S.R., 1957, 48 pp.).  
Basic rules and data for carrying out the objective of the Boiler Inspection  
Committee of the Ministry of Power Stations and the Electrical Industry are  
systematically arranged. Departmental rules and regulations made by the  
throughout Soviet territory are included. Instructions on the handling of  
tower cranes used in connection with boiler inspection, and guidance on work  
training programs, are included.

B.C. 7.0.0.0.

IZYUMSKIY, N.A.; LEBEDEV, A.S.; ALTUF'YEVA, A.M., red.izd-va; VOLKOV, S.V.,  
tekh.n.red.

[Symposium of rules and regulations pertaining to boiler inspection]  
Sbornik pravil i rukovodiashchikh materialov po kotlonadzaru. Izd.3.,  
ispr. i dop. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1959. 621 p.  
(MIRA 13:4)

(Boiler inspection)

LEBEDEV, A.S.

Standardizing technological processes for reconditioning of worn  
parts in metal-cutting equipment. Trudy LIEI no.6:168-186 '53.  
(MLRA 9:8)

(Machine tools--Maintenance and repair)

LEBEDEV, A.S.

Comparative mechanical wear testing of platings used in repairing machine-tool components. Trudy LIEI no.8:143-161 '54. (MIRA 9:9)  
(Machine tools--Repairing) (Mechanical wear)

25(1)

PHASE I BOOK EXPLOITATION

SOV/1954

Lebedev, Aleksandr Semenovich

Sposoby vosstanovleniya detaley stankov (Methods of Reconditioning Machine-Tool Parts) Moscow, Mashgiz, 1958. 238 p. 6,000 copies printed. Errata slip inserted.

Reviewer: O.A. Lukin, Engineer; Ed.: N.P. Sobolev, Professor;  
Ed. of Publishing House: T.L. Leykina; Tech. Ed.: L.V. Sokolova;  
Managing Ed. for Literature on Machine-building Technology  
(Leningrad Division, Mashgiz): Ye.P. Naumov, Engineer.

PURPOSE: This book is intended for engineering personnel in the field of reclaiming machine tool parts.

COVERAGE: The book explains the causes of wear of machine tool parts, and methods of reconditioning those parts by welding, resurfacing by welding, electroplating with chromium and iron, metallization, lining with bearing metals, and mechanical and electrospark machining. The book also discusses engineering and

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Methods of Reconditioning (Cont.)

SOV/1954

economic aspects of these methods and presents information on non-Soviet methods of reconditioning of machine parts. The author states that expenses for repairing represents 10 to 12 percent of the cost of equipment; and the cost of spare parts is 25 percent of total repair costs. Five to six percent of the machine tool capacity is engaged in making spare parts. No personalities are mentioned. There are 73 references: 40 Soviet, 23 English, 8 German, 1 Czech, and 1 French.

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1. Types of wear and their causes	5
2. Effect of wear of parts on workability of machine tools	5
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5. Methods and means of reconditioning parts	16
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LEBEDEV, A. S.

124-1957-10-12190

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 136 (USSR)

AUTHOR: Lebedev, A. S.

TITLE: The Life-expectancy of Metal Parts With Metal Coatings  
(Dolgovechnost' detaley s metallichesкими pokrytiyami)

PERIODICAL: Tr. Leningr. inzh.-ekon.in-ta, 1956, Nr 13, pp 69-85

ABSTRACT: The Author examines coatings applied by smelting, metal plating, chrome plating, steel plating (electrolytic precipitation of iron) and electric spark treatment. The life expectancy is determined in terms of the wear resistance and fatigue strength. Comparative data on the effect of coatings on the fatigue strength of steel parts are presented. It is noted that all types of coatings contribute to a decrease in fatigue strength. The most unfavorable effect occurs during the preparation of a surface for metal plating and the tapping of lacerated threads (its endurance limit is 49 percent lower than in the basic metal). To increase the endurance limit of untempered and uncemented cylindrical parts, the preparation for metal plating can be obtained by knurling; the preparation of hard-surfaced parts is best accomplished by electric spark treatment. The best wear resistance for parts in

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124-1957-10-12190

The Life-expectancy of Metal Parts With Metal Coatings

contact with babbit, bronze, and cast iron is provided by the porous and smooth chrome, the next is metal plating, then smelting and, lastly, steel plating. Data regarding the wear resistance of coatings in terms of the coating thickness are presented. The wearing properties were determined by the wear exerted on a coating by a disc made of a hard alloy. It is noted that smooth chrome is suitable for the coating of parts operating under relatively low specific pressures. Steel metal coatings are expedient for machine parts working at small slippage speeds and relatively low pressures under conditions of liquid friction; electric spark plating can be effectively used for parts working in moving connections; steel plating is suitable for use in parts operating in immobile fittings. For parts jointed in moving connections, steel plating with subsequent chrome plating and cementation is recommended.

V. K. Pereverzev

Card 2/2

SLAVCHENKO, Nikolay Antonovich; LEBEDEV, A.S., nauchnyy red.;  
GLAZKOVA, Ye.I., red.; NESMYSLOVA, L.M., tekhn. red.

[Electric tools for assembly and repair work] Elektrifitsirovannyy instrument dlia montazhnykh i remonnykh rabot.  
Moskva, Proftekhizdat, 1963. 109 p. (MIRA 16:12)  
(Power tools)

SLAVCHENKO, Nikolay Antonovich; LEBEDEV, A.S., nauchn. red.; GLAZKOVA,  
Ye.I., red.; NESYSEVA, L.M., ~~tekh. red.~~

[Electric tool for assembly and repair work] Elektrifitsi-  
rovannyi instrument dlia montazhnykh i remontnykh rabot.  
Moskva, Proftekhizdat, 1963. 109 p. (MIRA 17:2)

LEBEDEV, A.S.; BOTVINNIK, B.Sh., dots., retsenzent

[Methods of reconditioning machine tool parts] Spособy vosstanovleniia detalei stankov. Izd.2., perer. i dop. Moskva, Izd-vo "Mashinostroenie," 1964. 255 p.  
(MIRA 17:6)

KOPSAKOV, V.S., dokt. r. tekhn. nauk, prof.; LUKHIN, A.A., inzh.,  
retiree; YELIZHEV, M.A., kand. tekhn. nauk, ret.

[Fundamentals of the design of attachments in the machine  
industry] Osnovy konstruirovaniya prisoblenii v mash-  
nostroenii. Izd. 2., dop. i perer. Moskva, Mashinostroyeniye,  
1965. 359 p. (MIRA 18:7)

VOLCHKEVICH, L.I.; USOV, B.A.; LEBEDEV, A.S., inzh., retsenzent;  
YARKOV, A.M., inzh., retsenzent; MALOV, A.N., prof.,  
red.

[Automatic feed mechanisms] Avtooperatory. Moskva, Ma-  
shinostroenie, 1965. 142 p. (MIRA 18:12)

LEBEDEV, A.S.; IL'ICHEVA, Z.V., kand. tekhn. nauk

Determining optimum design of the working part of gear for lathe  
chucks. Avt. prez. 31 no.3:41-43 Mr '65. (1965: 18:7)

1. Moskovskiy avtomobil'nyy zavod imeni Likhacheva i Moskovskiy  
avtomekhanicheskiy institut.

ZONNENBERG, S.M.; LEBEDEV, A.S.; CHERNIAK, A.Ya., inzhener, ratsenent;  
VVEDENSKIY, T.A., redaktor.

[Pneumatic gripping devices] Pnevmaticheskie zazhimnye prisooblenia.  
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry.  
1953. 159 p. (MLRA 7:6)  
(Pneumatic tools) (Machinery)



LEBEDEV, A.S.

Pneumatic device for bending pipe. Avt.i trakt. pron. no.11:  
28-30 N '55. (MLRA 9:2)

1.Moskovskiy avtozaved imeni Stalina.  
(Pipe bending)

LEBEDEV, AS

NOVODENSKIY, Valeriy Vladimirovich; MARCHENKO, Aleksandr Afanas'yevich;  
~~LEBEDEV, Aleksandr Sergeyevich~~; KURYSHEV, Viktor Vasil'yevich;  
APIRIN, B.S., inzhener, redaktor; UDAL'TSOV, A.N., glavnyy  
redaktor

[Semiautomatic device for milling spiral grooves on rollers.  
Semiautomatic device for machining both faces. Device for machining  
slits in threaded stoppers. Device for milling casings] Poluavtomat  
dlya frezerovaniia spiral'nykh kanavok na valikakh. Poluavtomat dlya  
frezerovaniia dvukh tortsov. Prispособlenie dlya frezerovaniia  
shlitsev v rez'bovykh probkakh. Prispособlenie dlya frezerovaniia  
kozhukha. Moskva, 1956. 17 p. (Peredovoi proizvodstvenno-tekhnicheskii  
opyt. Ser. 11, Frezernye i zuboreznye raboty. No.T-56-188/4)  
(MIRA 10:9)

1. Moscow. Institut tekhniko-ekonomicheskoy informatsii  
(Machine tools--Attachments)

LEBEDEV, A.S.

Attachment for milling camshafts. Avt.1 trakt.prom. no.4:45-47  
Ap '56. (MLRA 9:8)

1. Moskovskiy avtozavod imeni Stalina.  
(Milling machines)

PAVLOV, Ya.P., kand.tekhn.nauk, dots.; KIRDYASHEV, Yu.N., kand.tekhn.  
nauk, dots.; LEBEDEV, A.S., kand.tekhn.nauk, dots.; FEDOSOVA,  
I.V., assistant

Coefficients of friction for asbestos-bakelite materials. Trudy  
LIEI no.23:5-17 '58. (MIRA 12:5)  
(Bakelite--Testing)) (Friction)

LEBEDEV, A.S., kand.tekhn.nauk, dots.

Selecting the most efficient method for reconditioning parts  
of equipment. Trudy LIEI no.23:124-138 '58. (MIRA 12:5)  
(Factories--Equipment and supplies--Maintenance and repair)

LEBEDEV, A. S.

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PHASE I BOOK EXPLOITATION

SOV/2288

Zonnenberg, Semen Moiseyevich, and Aleksandr Sergeyevich Lebedev

Pnevmaticheskiye zazhimnyye prispособleniya (Pneumatic Clamping Fixtures) 2nd ed., rev. Moscow, Mashgiz, 1959. 187 p. Errata slip inserted. 6,000 copies printed.

Ed. of Publishing House: N.A. Ivanova; Tech. Ed.: V.D. El'kind;  
Managing Ed. for Literature on Metalworking and Tool Making:  
R.D. Beyzel'man, Engineer.

PURPOSE: This book is intended for designers and technologists of machine building plants and may be useful to students of mechanical engineering.

COVERAGE: The authors discuss fundamental problems of designing modern pneumatic clamping fixtures, giving a description of fittings and control systems, and describing the problems of automation of these fixtures. Special attention is given to clamping mechanisms and to the principal schemes of the fixtures. The authors also describe fixtures for various types of machining.

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LEBEDEV, A.S., inzh.

Control of high pressure steampipes at electric power stations.  
Bezop. truda v prom. 8 no.11:29-30 N '64. (MIRA 18:2)

1. Upravleniye Moskovskogo gorodskogo okruga Gosudarstvennogo  
komiteta pri Sovete Ministrov RSFSR po nadzoru za bezopasnym  
vedeniyem rabot v promyshlennosti i gornomu nadzoru.

LEBEDEV, A. T.

"Erythrocyte Therapeutics in Surgery," Vestnik Khirurgii, 1953, vol. 73, No. 4



UFIMTSEV, A.M., inzh.; LEBEDEV, A.T., inzh.

Testing of turbogenerators in asynchronous operation. Elek.  
sta. 33 no.8:28-32 Ag '62. (MIRA 15:8)  
(Turbogenerators--Testing)

LEBEDEV, A.T., inzh.

Automatic control of a tractor with a hydraulic transmission.  
Mashinostroenie no. 2:81-83 Mr-Ap '64. (MIRA 17:5)

LEBEDEV, A. T.

~~LATYSEV, G. D.~~

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PHASE I BOOK EXPLOITATION SOV/5410

Tashkentskaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Tashkent, 1959.

Trudy (Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy) v. 2. Tashkent, Izd-vo AN UzSSR, 1960. 449 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR.

Responsible Ed.: S. V. Starodubtsev, Academician, Academy of Sciences Uzbek SSR. Editorial Board: A. A. Abdullayev, Candidate of Physics and Mathematics; D. M. Abduragulov, Doctor of Medical Sciences; U. A. Arifov, Academician, Academy of Sciences Uzbek SSR; A. A. Borodulina, Candidate of Biological Sciences; V. N. Ivashev; G. S. Ikramova; A. Ye. Kiv; Ye. N. Lob-nov, Candidate of Physics and Mathematics; A. I. Nikolayev, Candidate of Medical Sciences; D. Nishanov, Candidate of Chemical Sciences; A. S. Sadykov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Uzbek SSR; Yu. N. Talanin,

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Transactions of the Tashkent (Cont.)

SCV/5410

Candidate of Physics and Mathematics; Ya. Kh. Turakulov, Doctor of Biological Sciences. Ed.: R. I. Khamidov; Tech. Ed.: A. G. Babakhanova.

PURPOSE : The publication is intended for scientific workers and specialists employed in enterprises where radioactive isotopes and nuclear radiation are used for research in chemical, geological, and technological fields.

COVERAGE: This collection of 133 articles represents the second volume of the Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy. The individual articles deal with a wide range of problems in the field of nuclear radiation, including: production and chemical analysis of radioactive isotopes; investigation of the kinetics of chemical reactions by means of isotopes; application of spectral analysis for the manufacturing of radioactive preparations; radioactive methods for determining the content of elements in the rocks; and an analysis of methods for obtaining pure substances. Certain

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Transactions of the Tashkent (Cont.)

SOV/5410

instruments used, such as automatic regulators, flowmeters, level gauges, and high-sensitivity gamma-relays, are described. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

RADIOACTIVE ISOTOPES AND NUCLEAR RADIATION  
IN ENGINEERING AND GEOLOGY

Lohanov, Ye. M. [Institut yadernoy fiziki UzSSR - Institute of Nuclear Physics AS UzSSR]. Application of Radioactive Isotopes and Nuclear Radiation in Uzbekistan

7

Taksar, I. M., and V. A. Yanushkovskiy [Institut fiziki AN Latv SSR - Institute of Physics AS Latvian SSR]. Problems of the Typification of Automatic-Control Apparatus Based on the Use of Radioactive Isotopes

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Card 3/20

Transactions of the Tashkent (Cont.)

SOV/5410

Zhernovoy, A. I., and G. D. Latyshev [Institut yadernoy fiziki AN KazSSR - Institute of Nuclear Physics AS KazSSR]. Magnetic Fluid Flowmeter

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Zhernovoy, A. I., and G. D. Latyshev [Institute of Nuclear Physics AS KazSSR]. Use of a Nuclear Magnetic Resonance for Determining the Actual Volume of a Stream of Fluid at a Pipe Section With a Variable Diameter

20

Borukhov, M. Yu., and V. N. Ivashov [Institute of Nuclear Physics AS UzSSR]. The Problem of Measuring the Instantaneous Values of the Flow of Materials Transported by Pneumatic or Hydraulic Means

22

Borukhov, M. Yu., A. T. Lebedev, and U. Akbarov [Institute of Nuclear Physics AS UzSSR]. Principle of Automation of a Two-Stage Cycle of Ore Crushing and Classification

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Transactions of the Tashkent (Cont.)	SOV/5410	12
Borukhov, M. Yu., and A. T. Lebedev [Institute of Nuclear Physics AS UzSSR]. A Unified Radioactive Isodromic Regulator (URIR)		29
Borukhov, M. Yu., and B. K. Mal'tsov [Institute of Nuclear Physics AS UzSSR]. Experimental Application of High-Sensitivity Gamma-Relay		32
Botin, Yu. P., B. I. Verkhovskiy, N. G. Zelevinskaya, and V. V. Yakushin [Fizicheskii institut Akademii nauk USSR - Physics Institute AS USSR]. Methods for Increasing the Accuracy of Measurements of Radioactive Radiation Flux		36
Snisarenko, A., Z. Tarasova, Ye. Nepomnyashchiy, and V. Novopol'skiy [Nauchno-issledovatel'skiy institut shinnoy promyshlennosti-Scientific Research Institute of the Tire Industry]. Determination of the Wear of Car Tires by Means of Isotopes		43
Arkhangel'skiy, A. A., and G. D. Latyshev [Institute of Nuclear		
Card 5/20		

LEBEDEV, A.T.

Control characteristics of plate-type ore feeders. Obog. rud 5  
no.6:45-48 '60. (MIRA 14:8)

1. Institut yadernoy fiziki AN Uzbekskoy SSR.  
(Crushing machinery)



LEBEDEV, A. T., Cand. Tech. Sci. (diss) "Automatic Cycle of  
Crushing and Classification of Ores with Use of Radioactive Iso-  
topes," Tashkent, 1961, 16 pp. (Acad. of Sci. Uzbek SSR) 175  
copies (KL Supp 12-61, 269).

LEBEDEV, A. T.

Changing the circuit of the ER-111-54 controller for operating  
with radioisotope pickups. Priborostroenie no. 10:25-26  
O '62. (MIRA 15:10)

(Electric controllers)  
(Radioisotopes—Industrial applications)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R000929010014-5"

AUTHOR:

Lebedev, A. T.

151/62/000/001/019/237  
A060/A101

TITLE:

Application of radioactive isotopes in the scheme for automation of  
ore grinding and classifying processes

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 8, abstract 1058  
(V sb. "Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR.  
V. 3", Moscow, Gostoptekhizdat, 1961, 216-217)

TEXT:

In order to improve the parameters of the pulp obtained and the  
optimum running of the grinding process, a plan for automating the cycle of  
grinding and ore classification has been worked out. The uniformity of the pulp  
density is controlled at the discharge of the classifier of the second grinding  
stage by means of a radiometric ДПП (DPP) sensor. The density regulator  
connected to this system changes the quantity of water fed to the pulp-separator  
of the primary ore, as a function of the magnitude and the sign of the deviation  
from the predetermined density. A pulse unit for isodromic regulation is worked  
out and applied. It is installed on the servomechanism of the valve controlling  
the water supply. If the density does not attain the required value, a new

Application of radioactive isotopes ...

S/137/62/000/001/019/237  
A060/A101

pulse is generated. The electric circuit of the pulse attachment is connected to the contacts of the position regulating unit built-in into the indicator.

I. Margolin



[Abstracter's note: Complete translation]

Card 2/2

LEBEDEV, A.T.; KODENKO, M.N.

Device for studying the systems of the automatic control of a tractor with hydrostatic type hydraulic transmission. Trakt. i sel'khoz mash. no.5:8-10 My '64. (MIRA 17:6)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.

SEREBRYAKOV, I.N., inzh.; LEBEDEV, A.T., inzh.; ADOL'F, V.A., inzh.

Experimental automotive chassis with an automatic hydraulic  
displacement drive. Mashinostroenie no.4:94-95 J1-kh '64.  
(MIRA 17:10)

LEBEDEV, A.T., inzh.; LEBEDINSKIY, G.V., inzh.; SEREBRYAKOV, I.N., inzh.

Automation of the operations of a tractor with hydraulic-displacement transmission. Trakt. i sel'khoz mash. no.9:1-3 S '64.

(MIRA 17:11)

1. Khar'kovskiy traktorosbornochnyy zavod.

198409, A.C. 19th.

regulator of a tractor with a hydraulic displacement transmission.  
Bischofshausen no. 1892-94 N.Y. Co '65. (MCPA 1816)

LEBEDEV, A.T.; KARTUSHIN, V.P.; UCHURKHANOV, M.M.

Effect of nuclear radiation on the flotation process. TSvet.  
met. 38 no.6:11-14 Je '65. (MIRA 18:10)



L 20674-66 ENT(1)/EWA(h)

ACC NR: AP6009496

SOURCE CODE: UR/0106/66/000/003/0003/0010

AUTHOR: Belatskiy, A. F.; Lebedev, A. T.

ORG: none

TITLE: Synthesis of adjusted <sup>25</sup>filters on the passive elements

SOURCE: Elektrosvyaz', no. 3, 1966, 3-10

TOPIC TAGS: electric filter, signal element, radar signal analysis, radio signal, pulse duration modulation

ABSTRACT: A synthesis was formulated for the linear passive quadri-pole with end-point concentrated elements having characteristics which reproduce the property of adjusted filters for the arbitrary signal of the end duration. Canonical diagrams of the adjusted filters have been found. Problems of adjusted filters on elements with losses were analyzed. Orig. art. has: 2 figures and 15 formulas. [Based on author's abstract]

[NT]

SUB CODE: 17, 09/ SUBM DATE: 07Oct65/ ORIG REF: 002/ OTH REF: 002

Card 1/1 BK

UDC: 621.372.5

LEBEDEV, A.V., aspirant

Technic of endophotography in cancer of the larynx. Vest.otorin.  
22 no.2:93-96 Mr-Apr '60. (MIRA 13:12)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - doktor med.nauk  
I.I.Potapov) TSentral'nogo instituta usovershenstvovaniya vrachey  
i kliniki bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel'  
nauki RSFSR prof. I.Ya.Sendul'skiy) Moskovskogo oblastnogo  
nauchno-issledovatel'skogo klinicheskogo instituta imeni N.F.  
Vladimirovskogo.

(LARYNX neoplasms)  
(PHOTOGRAPHY)

LEBEDEV, A.V., aspirant

Color endophotography of cancerous tumors of the larynx. Zhur.  
ush., nos. i gorl. bol. 20 no. 3:31-34 My-Je '60. (MIRA 14:4)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - doktor med.nauk  
I.I. Potapov) Tsentral'nogo instituta usovershenstvovaniya vrachev  
i otorinolaringologicheskoy kliniki (zav. - zasluzhennyy deyatel'  
nauki RSFSR prof. I.Ya. Sendul'skiy) Moskovskogo oblastnogo  
nauchno-issledovatel'skogo instituta imeni M.F. Vladimirovskogo.  
(LARYNX—CANCER) (PHOTOGRAPHY, MEDICAL)

LEBEDEV.A.V., kand.med.nauk

Technique of endofluorography in cancer of the larynx. Zhur.  
ush., nos. i gorl. bol. 23 no.3:88-89 My-Je '63. (MIRA 16:7)

1. Iz Nauchno-issledovatel'skogo instituta otolaringologii Minis-  
terstva zdoravookhraneniya UkrSSR (dir.- zasluzhennyy deyatel'  
nauki prof. A.I.Kolomiychenko).  
(LARYNX—RADIOGRAPHY) (LARYNX—CANCER)

LAUREN, A. V.

"Experiment on the approximate calculation of the affluent (tributary) of ground waters in the shore zone, p. 228.

A paper found in the symposium "Works of the Laboratory of hydroecological Problems named F. P. Savarenshiy", Vol. III (1968), Moscow-Leningrad.

LEBEDEV, A.V.

"Problem of Determining the Water Permeability of Non-Water-Bearing Soil by  
Infiltration Through Cracks," Gidrotekh. Stroy, No 5, 1949

GARMONOV, I.V.; LEBEDEV, A.V.

[Basic problems in ground water dynamics] Osnovnye zadachi po dinamike podzemnykh vod. Moskva, Gos.izd-vo geol.lit-ry, 1952. 243 p. (MLA 6:8)  
(Water, Underground)

LEBEDEV, A. V.

"Experimental Method for Determination of Evaporation of Ground Waters and Their Supply by Infiltration of Atmospheric Precipitation Under Natural Conditions", Vopr. Gidrogeol. i Inzh. Geologii, 19-27, 1953.

The author describes lysimetric installation in the hydrogeological station (statsionar) of the All-Union Institute of Hydrogeology and Engineering Geology. An A. A. Rode-type lysimeter was used with a number of improvements added. The results of observations showed the close agreement with computed quantities as obtained by the method of finite differences of G. N. Kamenskiy. The experimental method, in contrast to Kamenskiy's method, does not require long observations. (RZhGeol, No 5, 1954)  
SO: Sum. No. 443, 5 Apr. 55



SOV/124-58-7-7784

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 69 (USSR)

AUTHOR: Lebedev, A.V.

TITLE: On the Migration of Moisture in the Earth and in Soils (K voprosu ob izuchenii migratsii vlagi v pochvakh i gruntakh)

PERIODICAL: V sb.: Vopr. izucheniya podzemn. vod. i inzh.-geol. protsesov. Moscow, Izd-vo AN SSSR, 1955, pp 31-40

ABSTRACT: Observations made at a hydrological experiment station on a 7-hectare area are compiled. The study of the migration of moisture is performed by means of an examination of the moisture balance and the ground-water balance linked with it. A vertical prism bounded on the top by the earth's surface and on the bottom by the deepest level of the ground water is isolated. The amount of the feeding of the ground water from above is calculated by the equation of the nonstationary flow in terms of finite differences (taking into consideration the annual fluctuations of the ground-water level, data on the volume of the flow, the permeability and the volume of the ground-water outflow). The balance of moisture is calculated from the volume of the surface feed and the change in the level of the ground water

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SOV/124-58-7-7784

On the Migration of Moisture in the Earth and in Soils

for a known period of observation. The volume of the moisture exchange between the earth and soil and the atmosphere is determined from the equation of the earth and soil moisture balance of the prism. Using the moisture-exchange value and the variation in the moisture capacity in the different layers of the balance prism, a diagram of the moisture migration is plotted. The investigations have shown that the top layer of the soil-ground prism is characterized by the greatest mobility of the moisture. The middle layer (below 0.9 m) has a relatively stable moisture content. In summer this layer is the principal conductor of upward and downward currents and during the autumn and winter periods it accumulates the moisture, storing it until spring when it is released into the ground-water flow. Bibliography: 5 references.

A.R. Shkirich

1. Earth--Moisture content    2. Soils--Moisture content    3. Mathematics--Applications

Card 2/2

LF 10-2-4 A.V.  
LEBEDEV, Anatoliy Viktorovich; BOCHEVER, F.M., red.; GUROVA, O.A., tekhn.red.

[Forecasting changes in the ground water level in irrigated areas]  
Prognoz izmeneniia urovnia gruntovykh vod na oroshaemykh territo-  
riakh; gidrogeologicheskie raschety. Moskva, Gos.nauchno-tekhn.  
izd-vo lit-ry po geol.i okhrane neдр, 1957. 175 p. (MIRA 10:12)  
(Water, Underground)

LEBEDEV, A.V.

Determining parameter from data obtained by station observations  
of earth moisture in aeration zones. Vop. gidrogeol. i inzh. geol.  
no.1550-61 '57. (MIRA 11:5)

(Water, Underground)

LEBEDEV, A. V., Doc Geol-Min Sci -- (diss) "Study of the balance of ground water<sup>s</sup> according to data obtained from stationary observations of their ~~xx~~ regime." Mos, Gosgeoltekhizdat, 1958. 36 pp (Min of Higher Education USSR, Mos State Order of Lenin and Order of Labor Red Banner Univ im M. V. Lomonosov), 110 copies. List of author's works pp 34-35 (11 titles) (KL, 18-58, 96)

GARMONOV, I.V.; LEBEDEV, A.V.

Hydrogeological conditions in the Pekhorka-Kupavenka interfluvium in connection with the evaluation of the regime and resources of ground water for water-supply purposes. Trudy Lab.gidrogeol.probl. 16:306-315 '58.  
(MIRA 12:2)

1. Laboratoriya gidrogeologicheskikh problem imeni F.P. Savarenko AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii.  
(Pekhorka Valley--Water, Underground)  
(Kupavenka Valley--Water, Underground)

LEBEDEV, A.V.

Some results of the study of moisture balance and dynamics in a  
zone of aeration obtained by the Moscow Hydrogeological Station.  
Vop. gidrogeol. i inzh. geol. no. 18:42-50 '59. (MIRA 14:5)  
(Moskva Valley--Water, Underground)  
(Klyaz'ma Valley--Water, Underground)

LEBEDEV, A.V.

G.N.Kamenskii's works on conditions and resources of underground  
waters. Trudy Lab.gidrogeol.probl. 40:23-30 '62. (MIRA 15:11)  
(Water, Underground)



LEBEDEV, Anatoliy Viktorovich; KITAYENKO, L.G., red.izd-va;  
IVANOVA, A.G., tekhn. red.

[Methods for studying the balance of ground waters] Metody  
izucheniia balansa gruntovykh vod. Moskva, Gosgeoltekhiz-  
dat, 1963. 191 p. (MIRA 16:10)  
(Water, Underground)

KONOPLYANTSEV, A.A.; KOVALEVSKIY, V.S.; LEBEDEV, A.V., nauchn.  
red.

[Principles of the distribution of an observation net  
for the study of the natural regime of underground  
waters; methodological instructions] Printsipy razme-  
shcheniya nabludatel'noi seti dlia izucheniia este-  
stvennogo rezhima podzemnykh vod; metodicheskie ukaza-  
niia. Moskva, 1963. 47 p. (MIRA 17:9)

1. Moskva. Vsesoyuznyy nauchno-issledovatel'skiy insti-  
tut gidrogeologii i inzhenernoy geologii.

LEBEDEV, A.V.

Methods for the solution of basic problems during observations of  
the regime of underground waters. Trudy VSEGINGEO no.10:31-37 '64.  
(MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii  
i inzhenernoy geologii.

LEBEDEV, A.V.

, Practice in statistical processing of the results of long-term observations of the regime of ground waters. Trudy VSEGINGEO no.10:64-72 '64.

(MIRA 17:10)  
1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii.

PRELIMINARY

Intensity of the light of natural elements in underground waters as revealed by a study of microfilm from the Bukhara-Karavonka Interflow. They indicated that the light of natural elements in underground waters is revealed by a study of microfilm from the Bukhara-Karavonka Interflow. They indicated that the light of natural elements in underground waters is revealed by a study of microfilm from the Bukhara-Karavonka Interflow.

LEEDEV, A.V.

Role of a forest in increasing the strength of Siberia. I. I.  
SO AN SSSR no.8: Ser. biol.-med. nauk no.48/1-16 (1)  
(1971 12:1)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR,  
Krasnoyarsk.

Lebedev, H. V.

NIKITIN, S. Ya.; SMOLYANKIN, V. T.; KOLGANOV, V. Z.; LEBEDEV, A. V.; LOMKATSI,  
G. S.

[Dispersion of slow neutrons into ortho-and paradeuterium] Ras-  
seianie medlennykh neutronov na orto- i para-deiterii; doklady,  
predstavlenyye SSSR na Mezhdunarodnuu konferentsiiu po mirnomu  
ispol'zovaniyu atomnoi energii. Moskva, 1955. 12 p. [Microfilm]  
(Deuterium) (Nuclear physics) (MLRA 9:3)

LEBEDEV, A.V.  
DIATTROPTOV, D.B., KOLGANOV, V.Z., LEBEDEV, A.V., NIKITIN, S. Ya.,  
SMOLYANKIN, V.T., and SOKOLOV, A.P. (Acad. Sci. USSR)

"Slow Neutrons Scattering by Ortho- And Para-Tritium."

paper submitted at the All-Union Conf. on Nuclear Reactions in Medium and  
Low Energy Physics, Moscow, 19-27 Nov, 57.



SOV-120-58-1-4/43

AUTHORS: Kolganov, V. Z., Lebedev, A. V., Nikitin, S. Ya. and Smolyankin, V. T.

TITLE: A Liquid Hydrogen Bubble Chamber (Zhidkovodorodnaya puzyr'kovaya kamera)

PERIODICAL: Pribury i Tekhnika Eksperimenta, 1958, Nr 1, pp 31-34 (USSR)

ABSTRACT: The construction of a working liquid hydrogen bubble chamber is described. The volume is 1 litre and the diameter 10 cm. The chamber was designed as a pilot experiment to obtain information which would be useful in the design of a much larger one. A section through the chamber is shown in Fig.1. The working volume of the chamber and the hydrogen reservoir are completely separated. The closed working volume of the chamber is surrounded by a hydrogen bath connected to the hydrogen reservoir. In this way good screening of the chamber from thermal radiation is achieved and the problem of temperature stability is simply resolved by the stabilisation of the pressure in the reservoir. An important feature of the chamber is the method of mounting of the glass

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SOV-120-58-1-4/43

A Liquid Hydrogen Bubble Chamber.

walls of the chamber. This is illustrated in Fig.2. The Pyrex windows are mounted on copper washers as shown in the latter figure and this was found to be very satisfactory. The method of illumination is described and is illustrated in Fig.3. A typical oscillogram of the working cycle is shown in Fig.4. The chamber can be kept at the lower pressure for 30 to 40 millisecs but this time can be varied. The re-establishing of the pressure to the upper value takes approximately 15 millisecs. Normally, the upper pressure is 7 atm and the lower 3 atm. A series of photographs was also taken with pressure reductions down to 1 to 2 atm. Special experiments have shown that the sensitive time is not less than 40 milli secs. The repetition frequency of the working cycle is about 7 to 10 cycles per minute. Fig.5 shows a photograph of tracks obtained in the neutron beam of a synchrocyclotron obtained in studies of  $\pi$ -meson formation in n-p collisions. The following persons collaborated: A. N. Yershov, N. A. Zubkov, V. A. Beketov, Ye.F. Lokhaneva,

Card 2/3

A Liquid Hydrogen Bubble Chamber.

SOV-120-58-1-4/43

N. I. Makarov, A. P. Sokolov, G. S. Lomkatsi, G. I. Blinov  
and Yu. S. Krestnikov. There are 5 figures, no tables and  
9 references, of which 6 are English, 3 Soviet.

SUBMITTED: July 3, 1957.

1. Bubble chambers--Design
2. Bubble chambers--Materials
3. Bubble chambers--Performance
4. Hydrogen (Liquid)--Applications
5. Neutrons--Detection

Card 3/3

LEBEDEV, A.V.

SOV-120-58-1-6/43

AUTHORS: Belonogov, A. V., Zel'dovich, A. G., Kolganov, V. Z.,  
Landsberg, L. G., Lebedev, A. V., Nikitin, S. Ya.,  
Smolyankin, V. T., Sokolov, A. P.

TITLE: A Photographic Setup for Large Hydrogen Bubble Chambers  
(Sistema fotografirovaniya dlya bol'shikh vodorodnykh  
puzyr'kovykh kamer)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1958, Nr 1, pp 38-41  
(USSR)

ABSTRACT: A photographic setup for hydrogen bubble chambers of large dimensions is quite different from that for Wilson and diffusion chambers. In particular, a gas bubble in liquid hydrogen scatters light mainly in the forward direction, most of it between 0 and 10°, say (cf Fig.1) so that it is impossible to photograph the tracks at 90° to the incident light as is done in the usual chambers. For small bubble chambers the photographs may be taken with direct transmission in which the source of light is on the one side of the chamber and the photographic camera on the other (Refs.3-5). However, it is very difficult to use this system with a large hydrogen chamber since it is desirable not to employ large glasses as it is difficult to mount these on the main body of the chamber. The present

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SOV-120-58-1-6/43

A Photographic Setup for Large Hydrogen Bubble Chambers.

authors have therefore developed a method of illuminating and photographing on one side of the chamber only. This method was tried on the working hydrogen chamber described in Ref.5 (this issue) and is shown in Fig.2. The back wall of the chamber was in the form of a spherical mirror, at the centre of curvature of which the source of light was placed. The light reflected from this mirror is focussed back again at the source and does not enter the objective of the photographic camera (B in Fig.2). The light which after reflection is scattered by the bubbles does enter the photographic camera and gives rise to the track images (Fig.3, facing p.35). The main disadvantage of this method is that in addition to the real images one gets the virtual images as well but these can be recognised by inspection or by a measurement of track co-ordinates by means of 2 stereo-photographs (the virtual image lies behind the mirror). A calculation of the scattered light as a function of angle,

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SOV-120-58-1-6/43

A Photographic Setup for Large Hydrogen Bubble Chambers.

the result of which is shown in Fig.1, is given in a mathematical appendix. There are 5 diagrams, no tables and 7 references, of which 4 are English and 3 Soviet.

SUBMITTED: June 3, 1957.

1. Bubble chambers--Equipment
2. Particles--Photographic analysis
3. Photography--Applications

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SOV/120-58-4-6/30

AUTHORS: Kolganov, V. Z., Lebedev, A. V., Nikitin, G. Ya.,  
Smolyankin, V. T. and Sokolov, A. P.

TITLE: A Liquid Deuterium Bubble Chamber (Puzyr'kovaya kamera s  
zhidkim deyteriyem)

PERIODICAL: Priroda i tekhnika eksperimenta, 1958, Nr 4, p 30 and  
1 plate (USSR)

ABSTRACT: In Ref.1 the authors described a working hydrogen bubble  
chamber. ~~An experiment~~, described in the present article, was  
made to discover whether it is possible to use deuterium as the  
working liquid in the chamber. Two difficulties had to be kept  
in mind. First, it was expected that the presence of  $\beta$ -active  
tritium in deuterium ( $10^{-8}$  to  $10^{-9}\%$ ) would lead to a large  
number of short tracks in the liquid and thus produce a con-  
siderable background. Experiments on deuterium in a diffu-  
sion chamber have been unsuccessful precisely for this reason  
(Ref.2). Secondly, the critical pressure of deuterium  
(16.5 atm) is considerably higher than the critical pressure  
for hydrogen (12.8 atm). It is well-known (Ref.3) that the

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A Liquid Deuterium Bubble Chamber

normal superheating of the liquid is effected [takes place] when the pressure in the chamber up before expansion is equal to two-thirds of the critical pressure. This condition may be easily satisfied if the chamber and the bath is filled with liquid deuterium. However, if the bath is filled with liquid hydrogen and the chamber with liquid deuterium, then it is impossible to obtain pressures greater than 8 atm in the chamber. For this reason it was feared that on expansion the superheating of the deuterium would be insufficient and the liquid would be insensitive to radiation. Experiments made to elucidate all these points have shown that it is possible to use deuterium as the working liquid in the bubble chamber without any special purification. The construction and operation of the deuterium chamber is similar in many ways to that of the hydrogen chamber. The bath was cooled down to liquid nitrogen temperature and was filled with liquid hydrogen. The chamber was then filled with technical deuterium which was not specially purified to remove tritium. The pressure in the hydrogen bath was increased to 12.4 atm and was kept at that level. After the thermal equilibrium between the chamber and the bath was

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A Liquid Deuterium Bubble Chamber

reached, an expansion of the working volume was carried out. In the absence of radioactive sources in the vicinity of the chamber no tracks or bubbles appeared in the working volume. When a  $\text{Co}^{60}$  source was placed near the chamber, pictures similar to that shown in Fig. 1 were observed after expansion. L.G. Landsberg and N.I. Makarov are thanked for their help in the experiment. There is 1 figure, no tables and 3 references, 2 of which are Soviet and 1 English. The authors also express their thanks to B.N. Dmitrивevskaya, director of the hydrogen liqued action station of the Laboratory of Nuclear Physics Problems (Laboratoriya yadernykh problem) of OIYAI, and to N.B. Delone who supplied the deuterium.

SUBMITTED: October 26, 1957

Card 3/3

L 20350-65 EWT(m)/EPF(c)/EMP(t)/EWP(b)  
ACCESSION NR: AP4041007

Pr-4 IJP(c)/AFWL JD  
S/0120/64/000/003/0005/0025

AUTHOR: Kliger, G. K.; Kolganov, V. Z.; Lebedev, A. V.;  
Smolyankin, V. T.; Sokolov, A. P.

TITLE: Problems of designing liquid-hydrogen bubble chambers. (A review) <sup>19</sup>

SOURCE: Pribery\* i tekhnika eksperimenta, no. 3, 1964, 5-25 <sup>27</sup>

TOPIC TAGS: bubble chamber, liquid hydrogen bubble chamber, bubble chamber design

ABSTRACT: Based on 1946-63 Soviet sources and 1952-63 Western (mostly American) sources, the review covers these points: invention and development of the chamber; principal parts and their arrangement (round, rectangular, conical chambers); transillumination at small angles; metals used for chamber housing and their low-temperature characteristics; illuminators, their expansion-contraction conditions, and gaskets used to meet them; thermostatic controls;

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L 20350-65

ACCESSION NR: AP4041007

0  
sylvan, gas, and piston expansion mechanisms; radiation screens; auxiliary cooling devices; safety devices and safety problems. Twelve large liquid-hydrogen bubble chambers (7 American, 2 French, 1 CERN, 1 British, and 1 TEF Soviet) are listed with these characteristics reported: working space dimensions, housing material, number and arrangement of illuminators, expansion system, illuminator gasket, piston gasket, thermostatic control, liquid hydrogen consumption, operating mode, piston stroke, expansion factor, magnet characteristics, exposure, false radius of curvature, year of completion. Orig. art. has: 20 figures, 14 formulas, and 4 tables.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: NP

NO REF SOV: 012

ENCL: 00

OTHER: 021

Card 2/2

L 13945-65 EWT(m)/T/EWA(m)-2 AFWL/SSD/ASD(a)-5/ESD(dp)/ESD(t)  
ACCESSION NR: AP4047888 S/0056/64/047/004/1228/1231

AUTHORS: Guzhavin, V. M.; Kliger, G. K.; Kolganov, V. Z.; Lebedev, B.  
A. V.; Marish, K. S.; Musin, M. A.; Prokoshkin, Yu. D.; Smolyankin,  
V. T.; Sokolov, A. P.; Soroko, L. M.; Ts'ui, Wa-ch'uang

TITLE: Elastic proton scattering<sup>19</sup> at 650 MeV

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,  
no. 4, 1964, 1228-1231

TOPIC TAGS: proton proton scattering, elastic scattering, angular  
dependence, scattering cross section, differential cross section

ABSTRACT: A total of 1767 events of elastic p-p scattering at 650  
MeV was registered with the liquid-bubble chamber of the ITEF,  
placed in the beam of protons with energy  $650 \pm 5$  MeV. The equip-  
ment and procedure were described by the authors elsewhere (ZhETF  
v. 46, 1245, 1964); the proton scattering angles were measured with

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the LYaP reprojector (A. T. Vasilenko et al. PTE, No. 6, 34, 1957).  
A statistical comparison of the present data with earlier results  
is made. The angular dependence of the differential cross section,  
averaged over angle intervals of  $3^\circ$ , is deduced from the results and  
approximated by means of an empirical polynomial. "In conclusion we  
thank M. P. Baldin for help with the measurements on the reprojector  
and microscope, and L. I. Lapidus for a discussion of the results."  
Orig. art. has: 2 figures, 2 formulas, and 1 table.

ASSOCIATION: Ob'yedinenny\*y institut yaderny\*kh issledovaniy  
(Joint Institute of Nuclear Research)

SUBMITTED: 30Apr64

ENCL: 00

SUB CODE: NP

NR REF SOV: 006

OTHER: 001

Card 2/2

ACCESSION NR: AP4031146

S/0056/64/046/004/1245/1256

AUTHORS: Guzhavin, V. M.; Kliger, G. K.; Kolganov, V. Z.; Lebedev, A. V.; Marish, K. S.; Prokoshkin, Yu. D.; Smolyankin, V. T.; Sokolov, A. P.; Soroko, L. M.; Ts'ui Wa-ch'uang

TITLE: Pion production in pp collisions at 650 MeV energy

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1245-1256

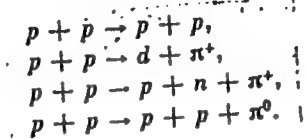
TOPIC TAGS: pion production, pion pion interaction, resonance scattering, Mandelstam representation, isotopic invariance

ABSTRACT: A liquid-hydrogen bubble chamber was used to investigate pion-nucleon correlations and the angle and energy distributions of pions produced by 650-MeV protons. The investigation was motivated by the few unanswered questions which the Mandelstam phenomenological resonance model (Proc. Roy. Soc. v. A244, 491, 1958) does not supply. Among these questions are the possibility that isospin is not con-

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ACCESSION NR: AP4031146

served and the role of the  $(3/2, 3/2)$  resonance in pion production. Four reactions are investigated



The results of the investigation indicate that the experimental angular distributions of neutral and charged pions are consistent with the assumption of isotopic invariance. The contributions of  $\pi N$ -subsystem states with isospin  $T_{\pi N} = 1/2$  and  $3/2$  are measured and found to be  $72 \pm 3\%$  in the latter case. The cross sections, the angular distributions, and energy spectra of the particles were determined by methods free of the influence of systematic errors inherent in experiments using particle counters. In addition, angle and energy

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correlations were obtained in the three-particle processes (3) and (4); these characteristics could not be obtained by earlier procedures. The liquid-hydrogen bubble chamber makes it possible to carry out an exhaustive study of all pp scattering processes in a single experiment. It was confirmed that the cross section for pion pair production in this energy range is negligible. "In conclusion we thank the technicians and laboratory assistants for good operation of the liquid-hydrogen bubble chamber, the scanning group of ITEF headed by D. I. Tumanova, the scanning group of OIYaI who reduced the photographs, and also Ye. M. Landis and Ye. S. Gal'pern for setting up the program and performing the calculations on the electronic computer." Orig. art. has: 14 figures, 21 formulas, and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics, GKAE); Ob'yedinenny\*y institut yaderny\*kh issledovaniy (Joint Institute of

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ACCESSION NR: AP4031146

Nuclear Research)

SUBMITTED: 14Nov63

DATE ACQ: 07May64

ENCL: 01

SUB CODE: GP, NP

NR REF SOV: 013

OTHER: 003

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ENCLOSURE: 01

ACCESSION NR: AP4031146

Comparison of pion energy spectra

Number of cases

(interval)	T <sub>π+</sub> , MeV. (интервал)	Число случаев		$\frac{N(\cos^2\theta_{\pi^+} < 1/2)}{N(\cos^2\theta_{\pi^+} > 1/2)}$
		$N(\cos^2\theta_{\pi^+} > 1/2)$	$N(\cos^2\theta_{\pi^+} < 1/2)$	
	0-20	4	10	$1,8 \pm 0,5$
	20-40	11	17	
	40-60	18	34	$2,2 \pm 0,4$
	60-80	13	33	
	80-100	18	52	$1,9 \pm 0,3$
	100-120	26	31	
	120-140	28	41	$1,7 \pm 0,3$
	140-160	11	27	
	160-180	0	1	
	0-180	129	246	$1,9 \pm 0,2$
Average energy	Средняя энергия, MeV	$93 \pm 5$	$90 \pm 5$	

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*LEBEDEV, A.Y.*

SOKOLOV, V.N., kandidat tekhnicheskikh nauk; KUROYEDOV, V.A., kandidat tekhnicheskikh nauk; SOROKIN, A.I., kandidat tekhnicheskikh nauk; LEBEDEV, A.V., inzhener; ZOBNIN, B.P., inzhener; VOYEVODKIN, I.B., inzhener.

Investigation of the heating of large ingots. [Trudy] TSNIITMASH  
66:83-115 '54. (MIRA 7:9)

1. TSNIITMASH (for Kuroyedov).
2. Uralmashzavod (for Voevodkin).  
(Steel ingots) (Metals--Heat treatment)

LEBEDEV, A-V

PHASE I BOOK EXPLOITATION 1042

Ural'skiy zavod tyazhelogo mashinostroyeniya, Sverdlovsk

Kovka i termicheskaya obrabotka (Forging and Heat Treatment) Moscow, Mashgiz, 1958. 132 p. (Series: Its Sbornik statey, vyp 5)  
6,000 copies printed.

Ed.: Kvater, I.S., Engineer; Tech. Ed.: Dugina, N.A.; Ed.  
(Ural-Siberian Division, Mashgiz): Sustavov' M.I., Engineer.

PURPOSE: This book is intended for engineers and technicians working in the field of forging and heat-treating of metals.

COVERAGE: The book presents material which reflects the achievements of Uralmashzavod (Ural Heavy Machine-building Plant imeni S. Ordzhonikidze) in the field of forging and heat-treating of metals. Various improvements in production methods, mechanization and automation of forging and heat-treating processes, application of various methods of inspection of forgings and elimination of rejects are described. Specific information on improvements in

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Forging and Heat Treatment 1042

forging and heat-treating of large parts such as turbine discs and rotors, cold-rolling-mill rolls, and crankshafts are presented. Descriptions are given of the results of new studies undertaken with a view to elimination of rejects and improvement of the quality of parts, determination of residual stresses at various cooling speeds, data on the efficiency of ultrasonic inspection and the effect of degassing of molten steel on the quality of forgings. The book was prepared by the members of the plant organization of NTOMashprom in connection with the 25th anniversary of the Ural Heavy Machine-building Plant.

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Forging and Heat Treatment 1042

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AVAILABLE: Library of Congress

GO/ksv  
1-7-59

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SOV/137-59-3-6888

Translation from: Referativnyy zhurnal Metallurgiya, 1959, Nr 3, p 28. (USSR)

AUTHORS: Lebedev, A. V., Istyugov, P. A

TITLE: Welding of Internal Defects During Forming of Large Forgings (Zavarka vnutrennikh defektov pri kovke krupnykh pokovok)

PERIODICAL: Sb. statey Ural'skiy z-d tyazh mashinostr im S Ordzhonikidze, 1958, Nr 5, pp 21-33

ABSTRACT: In order to verify the effect of the deformation (D) pattern on the weldability of internal defects, a roll (R) with a body of a diameter of 1030 mm forged from a 63.4-ton ingot of steel 34KhN2M was reformed. The forging (F) was rejected as a result of a periscopic inspection which revealed a large number of cracks in the channel extending from 25 to 60 mm in length. One section of the R was first forged into the shape of a disc between two dies, of which the lower one was grooved while the upper one was plain, and then into a shape resembling a step-pulley with diameters of 615 and 520 mm; the other section of the R was first given the shape of a plate and was then forged into the same form as the first section. Investigations demonstrated that internal cracks may be welded by forging and corroborated the

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SOV/137-59-3-6888

Welding of Internal Defects During Forming of Large Forgings

assumption that forging of the R into the intermediate shape of a plate produces greater D in its axial portion than when it is forged into a disc. The data of the investigation were employed in developing a new technology of forging of R's with bodies 900 mm in diameter. In accordance with this technology, the blank was reduced to a square cross section after upsetting, was heated, and was then forged into a plate at reductions amounting to 200-250 mm and at an advance of 600-700 mm. The ratio of the width of the forged plate to its height varied between the limits of 1.6-1.7. By employing the technique described, the D was extended throughout the entire section of the F, which, in conjunction with elevated temperatures of D, facilitated the welding of cracks. The plate was next forged into a square shape and then into the shape of a disc the diameter of which exceeded the diameter of the F of the R only by 50 mm. Concurrently, other measures intended to improve the quality of the R's were carried out. A mold was designed which ensures the production of ingots having an axial area of greater density; normalization was introduced in place of tempering of the R's in order to prevent the initiation or propagation of internal cracks.

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SOV/117-59-8-42/44

AUTHOR: Lebedev, A.V., Engineer

TITLE: Consultations. On the Calculation of Gears.

PERIODICAL: Mashinostroitel', 1959, Nr 8, pp 46-47 (USSR)

ABSTRACT: Question. How can the curvature radii of an involute tooth profile be calculated if the pressure angle is  $20^\circ$ ?  
Question. How to plot the tooth profile for cutting in a shaper if the gear is with corrected teeth, and the correction is obtainable by a shift of the cutting tool? Question 1 is answered by the formula. Question 2 is answered by a reference to books by V.A. Gavrilenko (Mashgiz 1956), M.A. Saverin (editor; Mashgiz 1951), N.S. Acherman (editor; Mashgiz 1953), and G.A. Alekseyeva, V. A. Arshinova, Ye.A. Smol'nikova (Mashgiz 1951). There are 4 diagrams.

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Processes and Properties Index

Evaluation, from a sanitary and hygienic standpoint, of the efficiency of cooling chambers for aging Aniline Black. A. V. Lebedev and A. V. Puzyrev. *Hig. Trud.* 14, No. 3, 56 (1936); *Chimie & industrie* 38, 473. With properly designed equipment the temp. of the fabric is lowered from 95-100° to 5-7° above room temp., and at the same time the cooling chamber acts as an air seal, so that the concn. of PhNH<sub>2</sub> in the atm. can be reduced to not over 0.02 mg. per l. A. P.-C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

*(Handwritten mark)*

Mechanized equipment for the production of diazo solutions. A. V. Lebedev and V. Ya. Davydov. Byull. Izvorno Nauch.-Issledovat. Tech. Inst. 1938, No. 6-7, 84-86; Khim. Referat. Zhur. 2, No. 5, 106-7(1939).—When diazo solns. are prepd. by manual labor in textile mills the amt. of the oxides of N in air reaches 0.18 mg./l. during the prepn. and 0.24 mg./l. during the filtration of the product. In mills that use semimechanized methods the content of the oxides of N in air was reduced to 0.008-0.01 mg./l. (normal 0.015 mg./l.). L. and D. developed a mechanized equipment which ensures all sanitary and hygienic requirements.

W. R. Henn.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSING AND PROPERTIES INDEX																			
<p>ca</p> <p>Volatility of technical <i>p</i>-nitroaniline with water vapors.  A. V. Lebedev. <i>Khlopchato-Bumashnaya Prom.</i> 1938,  No. 10, 33-5; <i>Khim. Referat. Zhur.</i> No. 4, 124(1939).—  When diazo solns. are obtained in treatment of tech.  <i>p</i>-nitroaniline (I) with hot water, vapors of light volatile  substance (<i>o</i>-nitroaniline (II) and <i>p</i>-nitrochlorobenzene)  and of water are given off. Lab. expts. (adsorption of the  evolved vapors by a 0.5% soln. of H<sub>2</sub>SO<sub>4</sub> after collecting  them with an aspirator from above the vessel in which the  diazo reaction has taken place) showed that the mixing,  dissolving and diazotization of tech. I is accompanied by  an evolution of nitro compds. (when mixing 0.17-0.25 g.,  dissolving 0.002 g. and diazotizing 0.065 g. per 38 g. of  nitroaniline), whereas no volatile products are evolved  from the purified nitroaniline (purified by a 4-fold treat-  ment with hot water followed by filtration) under similar  exptl. conditions. It was shown (by prep. mixts. of the  purified I with II) that the volatility of the tech. solns. of  I is caused by the presence of impurities of II.  W. R. Henn</p>																			
METALLURGICAL LITERATURE CLASSIFICATION										ECONOMY									
ECONOMY										ECONOMY									

CA

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The elimination of free aniline from recipes for aniline black baths. B. V. Ponomarenko and A. V. Lebedev. *Tekstil. Prom.* 8, No. 3, 23-6(1948).—Decreasing the content of free aniline in the bath increases the volatility of the bath accordingly on account of the increase in hydrolytic decompn. of aniline salts. According to hygienic and tech. principles, it is expedient to introduce not more than 5% free aniline into the bath to cut down this hydrolysis. Marshall Sittig

ACC NR: AP7003008

SOURCE CODE: UR/0413/66/000/02E/0156/0156

INVENTORS: Tolchinskiy, Ye. M.; Lebedev, A. V.; Gorbunova, G. I.; Dobrov, N. A.; Gusel'nikova, M. V.; Zagryadskiy, A. I.; Zazulin, V. A.; Podol'skaya, G. V.

ORG: none

TITLE: An automatic measuring and recording device "ERA". Class 42, No. 165597

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 156

TOPIC TAGS: measuring instrument, transistor, analog digital converter, logic element

ABSTRACT: This Author Certificate presents an automatic measuring and recording device "Era." The device contains a group relay commutator of the meters, grouped measuring amplifiers, an analog-digital converter with a zero-organ and a generator of stage voltages, and a directing unit. To connect a desired group to the analog-digital converter and to measure voltages of alternating signs, a logic commutator is connected to the outputs of the measuring amplifiers. This commutator contains transistor switches, the number of which is equal to twice the number of amplifiers. These switches are connected to the group counter and to the sign trigger. The input of the unity position of this trigger is connected to the directing unit, and the input of the zero position is connected with the output of the zero organ.

SUB CODE: 09/

SUBM DATE: 11Jul63

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UDC: 681.178.9

LEBEDEV, A. V.

Nov/Dec 48

USSR/CHEMISTRY - RUBBER, SYNTHETIC  
OSMOTIC PRESSURE

"A Physical and Chemical Study of Synthetic Rubber Solutions: I, Osmotic Pressure of Solutions of Sodium Butadiene Rubber," I. I. Zhukov, I. Ya. Poddubnyy, A. V. Lebedev, All-Union Sci Res Inst of Synthetic Rubber imeni Acad S. V. Lebedev, 8 pp

"Kolloid Zhur" Vol X, No 6

Describes construction of an osmometer to determine the molecular weight of high polymers by a dynamic and static method. Works out a method for preparing osmotic membranes which are semipermeable for rubber solutions. Determines the average numerical molecular weight of an unfractionated specimen of coreless sodium butadiene rubber in four different solvents as equaling 194,000. Submitted 8 Jun 48.

PA 65/49T9



LEBEDIKOV, A. V.

Reports of the 16th Conference on High Molec. Compounds, Acad. Sci.  
Research in the Field of High Molec. Compd.

The size and shape of the macromolecules of synthetic

rubber. I. I. Zaukov, I. Ya. Poddubnyy, and A. V. Le-

bedev. *Izvestiya o Oblas. Vysokomolekul. Soedineniyam*

*Vol. 6, No. 1, 1964, 238-52.* —Examn. of Na-butadiene

rubber (polymerized at 20, 40, and 60°) by means of frac-

tional pptn. and detn. of osmotic pressure of solns. in 60%

benzene-40% isoamyl alc., along with detns. of viscosities

in benzene solns., gave the following values for av. mol. wt.:

the lowest fractions, polymerized at 60°, 41,000; the high-

est, prepd. at 20°, 729,000. The relation of specific vis-

cosity  $[\eta]$  of all samples to the mol. wt. ( $M$ ) is given by:

$[\eta] = 2.7 \times 10^{-4} M^{0.75}$ . Thus the Standing equation

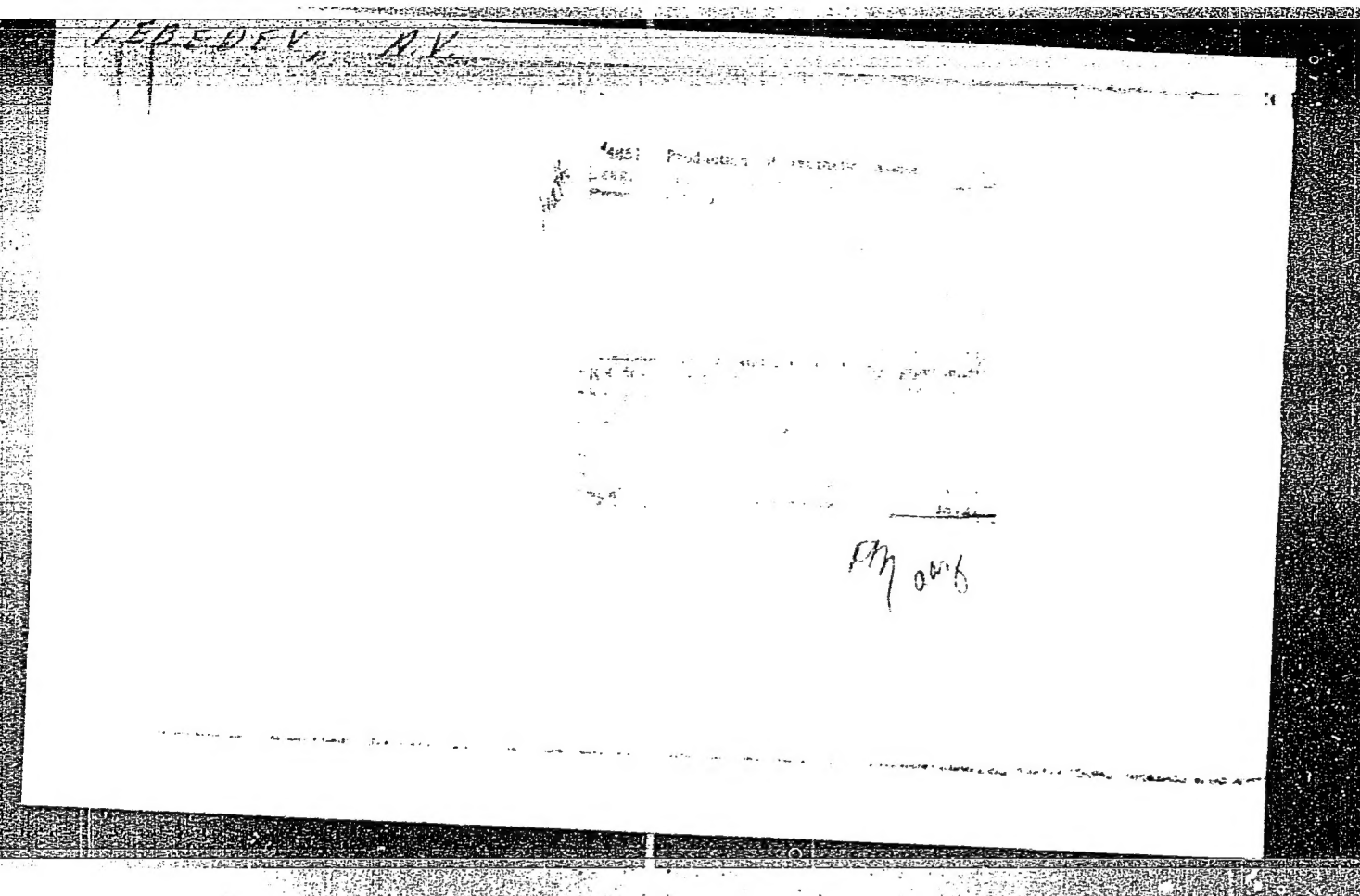
does not apply generally to such rubbers. The results in-

dicate different structural form of the mols. of the low- and

the high-mol. ranges. The higher-mol. products either have

more coiled chains or have greater extent of branching.

G. M. Kosolapoff



AUTHORS: Peyzner, A. B; Fermor, N. A; Lebedev, A. V. SOV/138 -58-4-2/13

TITLE: On the Influence of Plasticity of Rubber on the Technological Properties of Synthetic Latexes. (O vliyani plastichnosti kauchuka na tekhnologicheskiye svoystva sinteticheskikh lateksov)

PERIODICAL: Kauchuk i Rezina, 1958, Nr.4. pp. 4 - 5. (USSR).

ABSTRACT: S. V. Lebedev (Ref.1) showed that the plasticity is an important property of sodium 1,3-butadiene rubber, and, therefore, the plasticity was taken as a basis for classifying different types of this rubber (Ref.2). The plasticity indicates the basic molecular characteristics of the rubber (average molecular weight, fractional composition, branching etc.). It is, therefore, necessary to regulate the plasticity of emulsion rubbers during their synthesis. There are some publications on the synthesis of latexes containing rubbers of various plasticity (Ref.3), but no systematic investigations have been carried out on their use for the manufacture of various goods. The plasticity of the rubbers was proved to be one of the essential factors during investigations carried out by the All-Union Research Institute for Synthetic Rubber (VNIISK) (Vsesoyuznyy

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SOV/138 -58-4-2/13

On the Influence of Plasticity of Rubber on the Technological Properties of Synthetic Latexes.

nauchno-issledovatel'skiy institut sinteticheskogo kauchuka (VNIISK) on the conditions for the manufacture of industrial latexes. VNIISK, NIIR (Research Institute for Rubber and Latex Goods) (Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy) and the Leningrad Factory RTI elaborated methods and conditions for the preparation of special latexes SKS-50 PG (temperature of polymerisation = 50°C) and SKS-50 PKH (temperature of polymerisation = 10°C) by using fatty acids as emulsifiers, and also latex mixtures for manufacturing foam rubber (car seats) etc. It was found that the plasticity of the latex plays an important part during the manufacture of the foam, and that it also affects the properties of the foam itself. Methods and conditions for manufacturing the special latex SKS-50 were investigated by the Leningrad Branch of the Research Institute for the Tyre Industry (NIIKP) (Nauchnoissledovatel'skiy institut kabel'noy promyshlennosti (NIIKP)) and the Factory "Sevkabel", as well as conditions for coating the cables with a thin layer of insulation. The authors explained the influence of the plasticity of the polymer contained in the latex on the quality of the rubber goods,

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